# **The NICHD Connection**

### September 2020

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Anshika Jain, PhD Sonal Vaid, MD Our award-winning NICHD fellows



### NICHD Developing Talent Scholars Program

The NICHD Division of Intramural Research is committed to train, support, and sustain a diverse cohort of individuals, including those from backgrounds traditionally underrepresented in science.

Established in 2011, the **NICHD Developing Talent Program** provides a superlative research and mentoring experience to scholars while tailoring an academic and professional development plan to the needs of the individual. Read below to learn more about our current NICHD Developing Talent Program participants and each of their goals as a Developing Talent Scholar.



### **RACHEL DANSEREAU**

Postbaccalaureate Fellow NICHD advisor: Dr. Ajay Chitnis

Rachel is generating various transgenic zebrafish lines to control the migration of the primordium.

She would love to continue her educational career by pursuing a PhD and eventually becoming a professor.

I hope to increase my professional network and solidify different laboratory techniques.



PHOTO COURTESY OF KYLA ROLAND

Undergraduate school: Davidson College

**Specialty interests:** viral pathology, bacterial pathology, and genomics

Hobbies: reading, hiking and nature, cooking, and music

### **KYLA ROLAND**

Kyla examines how

the endogenous Tf2

in response to stress

immediate plan is to

go to graduate school

following her postbac.

in S. Pombe. Her

transposable elements

regulate gene networks

Postbaccalaureate Fellow NICHD advisor: Dr. Henry Levin

I want to learn about more career options and pathways, and more about the different types of PhD programs that I can apply to.

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### Letter from the Editor

This month we highlight several award-winning NICHD fellows who are participating in the funding and career development programs available at the NIH. We are excited to introduce you to the NICHD recipients of the following awards:

- » NICHD Developing Talent Program
- » NICHD Postdoctoral Fellows Recruitment Incentive Award (FRIA)
- » NIH Intramural Research Scholar Program
- » Intramural AIDS Research Fellowship (IARF)
- » Fellows Award for Research Excellence (FARE)

We'd also like to introduce you to our newest clinical fellow in adult endocrinology, Dr. Sonal Vaid, in this month's "<u>Clinical Corner</u>" column. Then mosey on over to <u>page 11</u> for Dr. Anshika Jain's Rep Report followed by our <u>September announcements</u> and <u>events</u>.

Enjoy this award-packed issue!

Your Editor in Chief, Shana R. Spindler, PhD

Questions or comments? Please email our editor at <a href="mailto:shana.spindler@nih.gov">shana.spindler@nih.gov</a>.



### NICHD Developing Talent Scholars Program

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PHOTO COURTESY OF JACOB OLONDO KUBA

**Undergraduate school:**University of Maryland, College Park

Specialty interests: molecular/cell biology, neuroscience, molecular dynamic simulations, endocrinology

**Hobbies:** photography, cooking, soccer, weight training

### **JACOB OLONDO KUBA**

Postbaccalaureate Fellow
NICHD advisor: Dr. Matthias Machner

Jacob is studying the host-pathogen interactions between *Legionella pneumophila* and *Acanthamoeba castellani* through an artificial evolution experiment. He is currently planning on applying to medical school next year (2021).

I would like to gain valuable skills needed for becoming a good researcher and explore different disciplines.



PHOTO COURTESY OF ESTHER KWARTENG

**Undergraduate school:** Duke University

Specialty interests: child health, health disparities Hobbies: dancing

### **ESTHER KWARTENG**

Postbaccalaureate Fellow NICHD advisor: Dr. Jack Yanovski

Esther is studying the characterization of eating behaviors as well as understanding the interactions between psychological and social factors that result in the development and maintenance of obesity in youth. She plans to attend medical school following her postbaccalaureate research training.

As a Developing
Talent Scholar, my
goal is to make my
NICHD experience
as fruitful and
meaningful as
possible through
the access of
unparalleled
mentorship and
professional
development.

# NICHD Fellows Recruitment Incentive Award (FRIA)

The objective of the **NICHD FRIA** is to encourage investigators in the Division of Intramural Research to recruit a diverse group of individuals, including those from groups traditionally underrepresented in science, for potential postdoctoral fellowship appointments in NICHD laboratories. The awards are made to PIs who are strong scientists and exhibit superior mentoring ability, as well as a demonstrated commitment to the career development and academic progress of their fellows.

Dr. Gisela "Gigi" Storz has been awarded the 2020 FRIA award for her recruitment of Dr. Aisha Burton. Dr. Burton studies the regulatory roles of small proteins on two component systems in *E. coli*. Read below to learn more about Dr. Aisha Burton and the most important lesson she has learned from her NICHD mentor, Dr. Storz.



PHOTO COURTESY OF AISHA BURTON

**Graduate school:** Indiana University

Specialty interests: molecular biology Hobbies: yoga, bike riding, reading

#### **AISHA BURTON**

**Postdoctoral Fellow** 

NICHD advisor: Dr. Gisela Storz



An important lesson that I learned from Dr. Storz is that you have to identify a career you are passionate about. I took the first six months in the lab getting acclimated to my project, but I also took time to explore my career options. Now, I know that I want to go into academia as a professor. This helps me have a goal in mind, but it also helps Dr. Storz tailor my training for that type of position.

### Intramural Research Scholar Program

The Intramural Research Scholar Program aims to build the workforce diversity of independent research scientists by selecting scholars who have a commitment to building a diverse Intramural Research Program (IRP). These scholars will manage resources, including trainees, and are scientifically independent from their previous mentors. Participants are considered highly competitive for Investigator (tenuretrack) positions in the IRP and outside after succeeding in this position.

Dr. Philip Adams, postdoctoral fellow in the lab of Dr. Gisela "Gigi" Storz, began an Intramural Research Scholar position on August 2, 2020. In his work, Dr. Adams characterizes RNA-mediated gene regulation in Borrelia burgdorferi, the causative agent of Lyme disease, during tick and mammalian infection. Check out his research at https://www.nichd.nih.gov/research/atNICHD/Investigators/adams.

Read below to learn more about Dr. Adams, including his thoughts on the importance of diversity in science, followed by a few tips on becoming a successful scientist:



PHOTO COURTESY OF PHILIP ADAMS

**Graduate school:** University of Central Florida

Specialty interests: bacterial Lyme disease

**Hobbies:** cooking, traveling and eating new food, group fitness classes, playing with his

#### **PHILIP ADAMS**

Postdoctoral Fellow

NICHD advisor: Dr. Gigi Storz



# A COMMITMENT TO DIVERSITY

I am very committed toward promoting inclusion and diversity in biomedical research. As a first-generation college student raised in rural West Virginia and Western Maryland, I've had to be persistent and a self-advocate when finding resources, scholarships, and mentors to assist me on my quest to pursue an education in science. In addition, I identify as gay male and have dealt with stigma surrounding this.

It is easy to become overwhelmed by exciting scientific pursuits and the often-busy lifestyle of our work, forgetting that science is very much an apprenticed trade. There is a reliance for knowledge and techniques to be passed from one scientific generation to the next, therefore, it would be nearly impossible for one to simply acquire the scientific skills required to succeed alone. It is my goal to attract and mentor all types of people in science—who can bring their unique perspectives to research projects. To accomplish this, our work environments need to model a diversity of race, gender, physical attributes, and sexualities.



#### FINDING SUCCESS IN SCIENCE

Start brainstorming career options early (first year of postdoc), seek out mentors, learn about training opportunities, and plan milestones to achieve your goals. When I first joined NIH as a postdoc, I was second-guessing a path in academic science and felt overwhelmed by the different options for alternative careers. I took a lot of training courses and did one-on-one sessions with my postdoc mentor and career advisors at NIH—during which, I was brutally honest about my struggle. One thing that I found super helpful was to make a list of the things about science that I loved and disliked.

Also, write a grant!! Regardless of one's ultimate career, this exercise is extremely advantageous. Grant writing forces a critical and rigorous lens to your science so it can help drive your experiments, in addition to the practice of grantsmanship. If you are truly interested in becoming an independent investigator, think about what your future research program would include and use grants to test this idea. Finally, find a cohort of other postdocs to form a network for support, but also to celebrate success with you!

### Intramural AIDS Research Fellowship (IARF)

The NICHD Office of Education keeps a running list of **funding opportunities** for fellows—one of which is the **Intramural AIDS Research Fellowship**. The IARF program, supported by the Office of AIDS Research (OAR), the Office of Intramural Training & Education (OITE), and the Office of Intramural Research (OIR), aims to recruit graduate students and postdoctoral scientists from a diverse group of disciplines to further cross disciplinary research into HIV and AIDS. During the 2020 IARF funding round, NICHD Graduate Partnership Program (GPP) student Dr. Mor Alkaslasi received one of the coveted IARF awards.

As a member of Dr. Claire Le Pichon's laboratory, Dr. Alkaslasi uses transcriptomics to study molecular mechanisms of neuronal injury and their roles in neuropathic pain. Read below to learn more about Dr. Alkaslasi, including her thoughts on the importance of interdisciplinary research.

#### **MOR ALKASLASI**

GPP Student

NICHD advisor: Dr. Claire Le Pichon



It takes diverse perspectives on biology to tackle complex scientific problems. As a neuroscientist, an interdisciplinary outlook allowed me to realize that the neural injury pathways I study are likely involved in the drug-induced pain HIV/AIDS patients can experience. Interdisciplinary research is critical; while antiretroviral therapies have greatly reduced the death rate, now scientists across disciplines can come together to solve the more nuanced issues around HIV/AIDS.



ALKASLASI
Undergraduate school:
Brown University-NIH GPP
Specialty interests:
neurodegeneration,
neuroimmunology,
bioinformatics
Hobbies: reading, hiking,

### Congratulations to the 2021 NICHD FARE Recipients

Congratulations to all fellows who received the annual **Fellows Award for Research Excellence (FARE)** for the 2021 competition. FARE is an NIH-wide competition that recognizes the important research of intramural fellows. We extend sincere congratulations to our 18 winners for their success and the honor they bring to the intramural programs of our institute. A special thanks to all NICHD fellows who submitted an abstract for sharing their research with the intramural community.

Below is the list of NICHD award recipients (and their NICHD mentors), including each fellow's research topic:

Rajakumar Anbazhagan (*Dufau*) – "Role of Phosphorylated Gonadotropin-Regulated Testicular RNA Helicase (GRTH/DDX25) in the Regulation of Germ Cell Specific mRNAs in Chromatoid Bodies during Spermiogenesis"

Jordan Aoyama (Storz) – "Glucose-induced Spot 42 small regulatory RNA encodes a 15-amino acid protein SpfP that blocks Crp-dependent activation"

**Katherine Bonnington** (*Machner*) – "First insight into vacuolar acid resistance by pathogen *Legionella pneumophia*"

Jessica Gleason (*Grantz*) – "Examining variations in child development outcomes by gestational age at delivery among term births"

Milena Jovanovic (Marini) – "Studies of OI patient and murine osteoblasts to investigate phenotypic variability of dominant Osteogenesis Imperfecta" **Dongjin Lee** (*Petros*) – "A novel approach to label actively transcribed genes during development using Mammalian Targeted DamID"

**Elodie Mailler** (*Bonifacino*) – "Role of the autophagy proteins ATG2 and ATG9A in lipid mobilization from lipid droplets"

**Cole Malloy** (*Hoffman*) – "Pin1 isomerization of Kv4.2 regulates seizure intensity in mice"

Miranda Marvel (Weinstein) – "Kdm4ab: A novel epigenetic regulator of vertebrate neural development"

Sahar Melamed (Storz) – "Overlapping and competing roles of the two RNA-binding proteins, ProQ and Hfq"

### Marion Ouidir (Tekola-Ayele) -

"Dyslipidemia in ethnic-diverse pregnant women is associated with placental DNA methylation at loci relevant for cardiometabolic diseases"

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### 2021 NICHD FARE Recipients

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Joshua Pemberton (*Balla*) – "Acute manipulation of outer membrane phospholipid composition directly alters mitochondrial dynamics and ultrastructure"

Saroj Regmi (*Dasso*) – "Modular organization of the nuclear pore structure: Y-complex and NUP188 stabilize different modules"

Christopher Rhodes (Petros) – "Integration of single cell transcriptomes and chromosome accessibility to detect regulatory elements critical to interneuron development"

Joyce Thompson (Rocha) – "Rapid reshuffling of master transcription factors allows exit from plasticity to establish cell-fates"

**Lauren Walling (Storz) –** "Small RNAmediated regulation of carbon and nitrogen metabolism in *Escherichia coli*"

Ashley Xiao (Loh) – "Neurotrophic factor α-1, not BDNF, is critical in preventing stress-induced hippocampal CA3 cell death and cognitive dysfunction in mice"

Aoshu Zhong (Storz) – "Transposase inhibitors encoded within the transposase gene"

### Clinical Corner: Meet Dr. Sonal Vaid

Sonal Vaid, MD, is a new clinical fellow in adult endocrinology in NIH's Inter-Institute Endocrinology Training Program. As both a Hoosier and a Boilermaker Engineer, Dr. Vaid's studies have allowed her to travel during medical school and serve her community back home in Indiana during her residency. She loves art, nature, the ocean, traveling, human psychology, humor, and learning about different cultures. Her interest in endocrinology originally stemmed from her curiosity about the origins of disease states and metabolic syndromes. She believes medicine is an art and hopes to always remain creative through patient care and research.

We asked Dr. Vaid a few questions about herself to get to know the person behind the degree. Introducing Dr. Vaid:





Where are you from, and what path brought you to an endocrinology fellowship at NIH?

I'm from Carmel, Indiana (Roots: Northern India). After completing many endocrine electives during both medical school and residency, I knew this is what I wanted to do. Since my days in biomedical engineering at Purdue, medical school and through residency, I would refer to NIH for articles and guidelines. I knew that if I wanted to gain expertise in a field, I would want to train at a place that would teach me how to conduct clinical research, dissect meaningful research, and think critically in order to always practice evidence-based medicine.

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### The Rep Report

By Anshika Jain, PhD

As the current NICHD Basic Sciences Institutes and Centers (IC) Representative, I represent NICHD postdoctoral fellows at the Fellows Committee (FelCom) meeting every month and share the latest news with you here. Do you have a concern or question that you want brought up at the next meeting? Contact me at anshika.jain@nih.gov!



FelCom welcomes the newly elected Basic Science co-chair, Sara Young-Baird.

The Visiting Fellows Committee is seeking a new co-chair! Contact Vrushali Agashe (vrushali.agashe@nih.gov) if you are interested. The committee also hosted an engaging and thought-provoking roundtable discussion on diversity and inclusion with Dr. Michael Sheridan, the OITE Special Advisor for Diversity and Wellness Programs.

#### SUBCOMMITTEE ANNOUNCEMENTS

The **FARE committee** announced the FARE 2020 awardees in mid-June. FARE awardees can contact their relevant IC coordinator to address any concerns in regard to how they can spend their awards (e.g. spending on non-travel research expenses).

The **National Postdoctoral Association (NPA)** liaison announced various items for NPA members:

- » NPA continues to update their COVID-19 resource page: https://www.nationalpostdoc.org/page/COVID19Resources. If you have resources you would like to share, please email them to contact@nationalpostdoc.org.
- » NPA is collecting online survey data about how NPA can address current issues postdocs face.
- » You can upload your resume/CV to the NPA's Career Center for free!
- » If you are interested in contributing to <u>The POSTDOCket</u>, consider becoming an ad hoc writer! Fill out the volunteer form at <u>nationalpostdoc.org</u> (you will need to log in).
- » REMINDER: All NIH postdocs have a free NPA membership!
- » Check out the POSTDOCket and the NPA community corner for current openings on various committees!

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### The Rep Report

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The Recreation and Welfare/Health and Wellness Committees liaison, Tiffany Zarrell, started two wellness channels on the Bethesda Postdocs group on Slack to discuss stress management, virtual workout activity scheduling, and other wellness-related items! Join using your non-NIH email at: <a href="https://join.slack.com/t/bethesdapostdocs/shared\_invite/zt-gbki91kj-l8tVTcVTwDHiFTTApQTqlg">https://join.slack.com/t/bethesdapostdocs/shared\_invite/zt-gbki91kj-l8tVTcVTwDHiFTTApQTqlg</a>.

Free "Fitness for You" classes offered by ORS, DATS, and R&W in August are available at <a href="https://www.facebook.com/NihRwFitness/videos">https://www.facebook.com/NihRwFitness/videos</a>.

The **Service and Outreach Subcommittee** announced opportunities to volunteer with Raising Excitement for Science, Engineering and Technology (RESET), a nonprofit that delivers enriching and engaging STEM programming to pre-kindergarten through 8<sup>th</sup> grade students. Please email Surangi Perera (**pererasn@nih.gov**) if you are interested in creating hands-on experiments and activities for science classes.

Stay tuned for more information from the FelCom committee in next month's newsletter.

Stay well and stay safe, everyone!



### September Announcements

# DUE THIS MONTH: INTRAMURAL RESEARCH FELLOWSHIP (IRF) Funding opportunity for all NICHD fellows

In 2017, DIR launched the Intramural Research Fellowship (IRF), a competitive research funding opportunity for NICHD postdoctoral, visiting, and clinical fellows. Its main objective is to promote grant writing among our intramural trainees, while enhancing awareness of the various components of an NIH grant application.

The IRF submission date is **Monday, September 14, 2020**.

For more information on the IRF, please visit <u>NICHD Intramural</u> <u>Research Fellowships</u> or email Dr. Erin Walsh (<u>erin.walsh@nih.gov</u>).

## NICHD POSTBAC ORIENTATION SESSION Wednesdays, September 16 & October 14, 1–2 PM

Our institute has approximately 100 postbacs conducting both clinical and basic science research. The Office of Education would like to bring our postbacs together to meet each other and discuss volunteer and training opportunities on campus, while also facilitating the transition of postbacs back to the physical workspace in situations where a return is appropriate.

We aim to enrich fellows' NIH experience with career development, outreach, and social activities. Learn about:

- » Guidelines and clearance for the return of postbacs to the physical workplace
- » NIH Library resources
- » The annual postbac course
- » Shadowing opportunities in the NIH Clinical Center
- » And more!

This year's NICHD Postbac Orientation Session is mandatory for all postbacs who started in or after March 2020. To register, please contact Ms. Monica Cooper (cooperm@mail.nih.gov).

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### September Announcements

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#### SALZMAN VIROLOGY AWARD APPLICATION DEADLINE IS SEPTEMBER 21

The Salzman Virology Awards honor the 40-year career of Dr. Norman P. Salzman in virology research and his accomplishments in mentoring of young scientists. Two awards will be given. One postdoctoral fellow will receive a plaque and an award of \$2,500. One graduate student/postbaccalaureate trainee will receive a plaque and an award of \$1,000. The mentors of the awardees will each receive a plaque. The winners will give talks during the 22<sup>nd</sup> Annual Norman P. Salzman Memorial Symposium while selected other applicants will be invited to present posters.

The application due date for the Salzman Virology Awards is **September 21, 2020**. Application forms and eligibility information can be found at **fnih.org/ SalzmanSymposium**.

#### PRAT PROGRAM APPLICATIONS ARE DUE OCTOBER 2

Fellows in the NIGMS Postdoctoral Research Associate Training (PRAT) program receive three years of stipend support to conduct independent, mentored research in an NIH intramural laboratory. The PRAT application process is similar to the F32 Postdoctoral NRSA, and applicants who are already in the NIH intramural program may apply if they began postdoctoral training on or after June 1, 2019 and are a U.S. citizen or permanent resident. The PRAT program is especially interested in ensuring the applicant pool reflects the diversity of the biomedical PhD talent pool, and strongly encourages applications from scientists in groups underrepresented in the biomedical sciences. For more information about the program, eligibility, and the NIGMS mission, please visit <a href="https://www.nigms.nih.gov/training/pages/prat.aspx">https://www.nigms.nih.gov/training/pages/prat.aspx</a>.

#### GAIN PROGRAMMING SKILLS WHILE TELEWORKING FROM HOME

During this time of extended telework, the NICHD's Bioinformatics and Scientific Programming Core (BSPC) is offering to help fellows gain valuable programming and data analysis skills. BSPC can provide several resources for learning the R programming language as well as develop custom learning plans using online resources to meet specific learning goals. If you are interested in programming and data analysis, please contact Dr. Ryan Dale at <a href="mailto:ryan.dale@nih.gov">ryan.dale@nih.gov</a>.

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### September Events

WEDNESDAY, SEPTEMBER 16, 1–2 PM
Postbac Orientation Session
NICHD Office of Education

We would like to bring our postbacs together to meet each other and discuss volunteer and training opportunities on campus, while also discussing new guidelines and clearance requirement for the return of postbacs to the physical workplace.

**This year's NICHD Postbac Orientation Session is** *mandatory* **for all postbacs who started in or after March 2020.** To register, please contact Ms. Monica Cooper (<a href="mailto:cooperm@mail.nih.gov">cooperm@mail.nih.gov</a>).

### THURSDAY, SEPTEMBER 24, 1-2 PM

"Making the Most of Your PhD and Postdoc: How to Develop Career Relevant Skills in Academia"

Lauren Celano, CEO Propel Careers

This webinar will provide advice on ways to proactively build, develop, and enhance specific skills during your PhD or postdoctoral training in order to build transferrable skills that are valuable for your career. Lauren will provide an overview of skills useful for both research and non-research careers such as consulting, business development, communications, and medical affairs. She will also highlight ways to build transferrable skills such as collaboration, leadership, management, and presentation skills, as well as hard skills like budgeting, vendor management, protocol development, and writing. Additionally, she will showcase ways to highlight these skills on a resume so that organizations looking to hire you are aware of the value you bring to them.

Please email Ms. Monica Cooper (**cooperm@mail.nih.gov**) if you are planning to participate.

#### ONGOING EVENTS AROUND CAMPUS

**NIH-Wide Office of Intramural Training and Education (OITE) Events**For more information and registration, please visit **Upcoming OITE Events**.

#### **NIH Library Training and Events**

For more information and registration, please visit the **NIH Library Calendar**.





at **shana.spindler@nih.gov**.